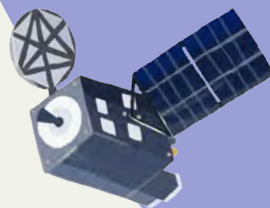


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Arrived at Auckland University of Technology

iLEAPS-OzFlux joint conference 2023

The research platform "iLEAPS" (Integrated Land Ecosystem-AtmosphereProcesses Studies) is one of several Future Earth research initiatives, with the critical goal of bringing together researchers from a variety of fields related to land-atmosphere exchange processes. The 6th iLEAPS Science Conference in 2023 has been held Auckland, New Zealand, in conjunction with the yearly conference of the Australian/New Zealand Network for eddy covariance measurements (OzFlux).

Ichii's laboratory always pays attention to the land-atmosphere carbon cycle process, and actively participated in the "iLEAPS-OzFlux joint conference 2023" this time. The conference was delivered in a hybrid context, that being a mix of physical and virtual attendance. For more direct communication with the participants, Prof. Kazuhito Ichii and PhD student Beichen Zhang brought the work progress of Geostationary Satellite to the on-site in New Zealand.



A scene of Prof. Ichii's presentation

The conference was hosted at Auckland University of Technology's conference venue for four days, from January 31 to February 3. It features several excellent keynote presentations. Keynote speakers included Distinguished Professor Graham Farquhar, on whose models the majority of current carbon cycle models are based. The participants are also from well-known universities and research teams, which is a valuable learning opportunity for young researchers. For our group, Prof. Ichii spoke in the "5.2 Satellite-based vegetation monitoring, emerging techniques" session with "Monitoring seasonal variations in terrestrial vegetation activities across Southeast Asia using a geostationary satellite, Himawari-8" as the title; Beichen Zhang presented "Evaluation of Himawari-8/AHI surface reflectance using LEO sensors with off-nadir observation mode for terrestrial monitoring applications" in session "Satellite applications for biosphere impact on atmospheric composition".

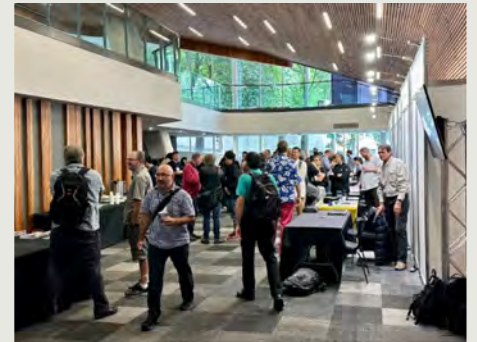


A scene of Beichen Zhang's presentation

Here are also various presentations from teams in Australia, China and Korea on terrestrial applications using geostationary satellites. Our presentations greatly attracted their interest. We exchanged in-depth discussions with several teams during the tea break and after the conference. In particular, Prof. Xuanlong Ma from Lanzhou University in China, who worked for a period of time at University of Technology Sydney, is currently preparing a joint collaboration with our team on the terrestrial application aspects of geostationary satellites. We also had discussions with Dr. Ankur Srivastava from the University of Technology Sydney and Dr. Jiaqi Tian from the National University of Singapore and are looking forward to future exchange and collaboration.

With this attending experience of iLEAPS-OzFlux 2023, our team (Ichii's Laboratory) has established a favorable cooperation with various university teams to maintain an active consensus in the field of terrestrial application of geostationary satellites. Also, we expect to have more impact and gain more from future conferences and exchanges.

In addition, for the PhD student Beichen Zhang, the international platform and the many outstanding presentations broaden his horizons and help him to develop a balanced perception of scientific research. In terms of expertise, he furthered understanding of how flux data are observed and used, as well as the common gas (e.g., CO₂, N₂O and CH₄) and carbon-cycles related modeling. By interacting with numerous researchers, he recognized the importance of landmark studies and research direction planning. This makes him more enthusiastic and motivated about his research. (Chiba Univ. Beichen Zhang)



Communication during the tea break

米国・メリーランド大学 訪問レポート



米国・メリーランド大学の The Department of Atmospheric and Oceanic Science に2週間滞在し、Jonathan Poterjoy 先生のグループにおいて研究活動を行ってきました。メリーランド大学は州立大学で、メリーランド州カレッジパークに位置しています。気象分野における国際的の評価が非常に高いことが特徴の一つである大学です。

訪問先の研究室の指導教官である Poterjoy 先生は、米国のデータ同化研究において若手ながら非常に高い成果を残している著名な研究者であり、特に局所粒子フィルタの先進的な研究を行っていることで、世界的に注目されています。2週間の滞在の中で、Poterjoy 先生の研究チームによるゼミ、個別のミーティング、The Department of Atmospheric and Oceanic Science 全体の講義を経験させていただきました。いずれも非常にハイレベルで白熱した議論を体感できた、非常に良い機会でした。

また、私の研究テーマである「リザーブコンピューティングを用いたデータ同化技術の改善」について Poterjoy 先生の研究チームとの議論を通して、新たな実験やアルゴリズムを考案することができました。データ同化研究者のコミュニティでは誰もが知っている研究者達と同じ教室でゼミを行うことは、研究のインスピレーションを受けるだけでなく、研究に対するモチベーションが刺激されました。(千葉大学 大瀧 貴也)